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ABSTRACT

The project described in this paper attempted to provide vocationally tracked high school students with the literacy skills needed to compete successfully in today's high-technology work force. This attempt was carried out by: (1) assisting students in establishing their vocational objectives in order to focus on specific literacy requirements; (2) modifying and adapting texts and materials to students' specific vocational needs: (3) employing problem-solving and decision-making models of job literacy; (4) implementing cooperative team learning strategies; and (5) incorporating computer literacy and applications into a basic skills English curriculum. Corollary aims were to increase student, parent, and employer confidence in the curriculum and to reduce the dropout rate. Forty high school seniors enrolled in 2 basic skills English classes were targeted, with the 5 strategies implemented during a 12-week period. Results were positive and program objectives were met. Functional literacy test scores; student, parent, and employer surveys; and the dropout rate all showed improvement, although less than had been expected. Less-than-expected results were attributed to the measurement instrument for literacy used (Career Ability Placement Survey) and the program's brief time period. The report concludes with a recommendation to expand the program into a 3-year effort in vocationally tracked basic English courses. (The document includes 33 references. Appendices contain basic skills in English IV curriculum and student, parent, and employer surveys.) (KC)

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Vocational Readiness: Preparing High School Students for the Literacy Demands of a High-Tech Workplace through Career Education, Material-Relevancy, and Cooperative Problem-Solving Models.

by

Alexandra Penn
Cluster 37

A Practicum I Report presented to the
Ed.D. Program in Child and Youth Studies in Partial fulfillment of the
Requirements for the Degree of doctor of Education

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Approved:

4-27-91 — Date of Final Approval of Report

Wm W. Anderson — Wm. W. Anderson, Ph.D., Adviser

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ABSTRACT

Vocational Readiness: Preparing High School Students for the Literacy Demands of a High-Tech Workplace through Career Education, Material-Relevancy, and Cooperative Problem-Solving Models. Melbourne, Florida., 1991: Practicum I Report, Nova University, Ed.D. Program in Child and Youth Studies. Descriptors: Adult literacy/Basic Skills/Functional Literacy/ Education/Educational Assessment/Business/Industry/Vocational Education/Education-Work-Relationship/Employment Problems/Job-Performance/Job-Training/Labor-Force/Organizational Communication/ Computer Literacy/Technological Literacy/Problem Solving/Cognitive Process/Writing- Processes/Task-Analysis/Content-Area-Writing/Writing Instruction/Reading-Writing-Relationship.

The aim of this practicum was to prepare vocationally tracked high school students, with the literacy skills needed, to successfully compete in today's high-tech work force by: 1) assisting students to establish their vocational objectives in order to focus on specific literacy requirements; 2) modifying and adapting texts and materials to students' specific vocational needs; 3) employing problem-solving and decision-making models of job-literacy; 4) implementing cooperative/team learning strategies; and, 5) by incorporating computer literacy and applications into a Basic Skills in English curriculum. Two corollary aims were to increase student, parent, and employer confidence in curriculum with respect to job preparedness and to reduce the drop-out rate as a result of participants' goal-specific successes.

The following problem-solving steps were taken in which the issues of job literacy for the vocationally tracked student were addressed: 1) forty high school seniors enrolled in two Basic Skills in English classes were targeted as subjects; 2) permission from administration, parents, employers and students was obtained when and where necessary; 3) the implementer of the practicum was also its administrator, facilitator and monitor; and 4) a comprehensive intervention plan was designed in which the afore-mentioned solution-strategies were implemented and incorporated into the normal class schedule over a twelve week period.

Results of this practicum were positive; and objectives were met. Data demonstrated that career education, material-relevancy, and cooperative problem-solving models can prepare vocationally tracked high school students, with the literacy skills that they need, to successfully compete in today's high-tech work force. It further showed an increase in student, parent, and employer confidence in curriculum with respect to job preparedness and a reduction in participants' drop-out rate. In addition to fulfilling the above prescribed objectives, it was observed that students exhibited high levels of motivation, interest and cooperation. Findings revealed the value of incorporating practicum solution-strategies into the Basic Skills in English course.

Secondarily, the need for future study in this area has been evidenced. Future investigation should explore 1) including career exploration, vocational literacy development and the subsequent application of those literacies into a three year comprehensive basic English course for the vocationally-tracked high school student; 2) developing and administering a language skills test which measures specific desired learning outcomes of vocational communication; 3) developing collaborative relationships between school and private industry in order to afford the students greater exposure to the workplace; 4) using industry-standard hardware and software; and 5) introducing computer-aided-instruction tailored to career literacy.

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August 4, 1991 Alexandra Penn

CHAPTER I

INTRODUCTION

Description of Community

This practicum was implemented in a secondary school setting. While this is primarily a three year high school, (grades ten through twelve) it incorporates ninth grade for selected special education programs as well as Adult/Community Education programs. Operational since 1955, the institution occupies a 40 acre site.

The school is centrally located in a small, but rapidly growing, city; and is fed by six other towns and small cities. It is accessible to all of the surrounding areas by main streets and thoroughfares. The feeder communities are socio-economically and culturally diverse, producing a heterogeneous distribution of students. Although employment opportunities are not abundant, high-tech industry dominates the graduates' employment arena. To a lesser degree, service and tourism jobs are also prevalent.

The total elementary and middle feeder school population is 8,383. Average enrollment over the past five years has been 1,369, with thirty-four freshman, 510 sophomores, 439 juniors and 347 seniors. The racial/ethnic distribution has been, 87.9% white, 8.8% black and 3.3% other. Projections for the next five years remain constant at 1,300, with equivalent ratios.

The combined feeder communities lie within a 500 square mile area and are geographically comprised of swamplands, farmlands, beaches, mangroves and lagoons. Pockets of these communities house small inner-city-like ghettos in which crime (drug dealing and abuse) is a problem. Students from these areas often arrive burdened with the social pathologies indigenous to their inner-city lives.

Practicum subjects/participants were twelfth grade, vocationally tracked students enrolled in a Basic Skills in English course. These students, while predominantly low achievers, were of mixed abilities. There were high functioning seniors enrolled in the classes simply because they did not want to challenge themselves in their final year by taking British Literature - the alternative senior English class; and there were exceptional education students who, by their senior year, had finally been mainstreamed into the regular classroom. Between those two extremes, were everything from young men aspiring to be automechanics to young women with early childhood education on their minds. Another large portion of the class population was made of young people "marking time," unsure of what they wanted to do when they graduated. However, with few exceptions, they were all vocationally-tracked.

The Basic Skills in English course is offered to all grades; there are between two and three sections for each level, with an average of twenty students per class. Generally, there are only two sections offered to seniors. Therefore, there were a total of forty students in the target group, twenty-three young men and seventeen women. The racial/ethnic ratio in this Basic Skills in English/target group was three to one, whites to blacks and others; in contrast to the school's nearly nine to one.

The problem, which this practicum addressed, had never been dealt with at this work setting.

Writer's Work Setting and Role

The practicum implementer/writer instructs the Basic Skills in English classes offered to seniors as well as three honors, American Literature classes. The writer is a full-time tenured instructor, dually certified to teach English at the junior/secondary school levels and the visually impaired at all grade levels. Eight of the writer's twelve-years teaching experience has been in teaching high school English to a variety of ability groups; four years have been in special education.

The writer has a great interest in computer technology and is proficient in wordprocessing, data processing, computer aided graphic design and computer aided drafting software. Fluency includes knowledge of over fifty software packages on four operating platforms: IBM, Tandy, Apple and Macintosh. The writer also works as outside educational advisor and curriculum developer to a computer consulting firm.

Meeting county mandated objectives with county imposed curriculum, syllabus and texts is a school-prescribed responsibility at this work setting (See Appendix A). Therefore, the writer's on-going self-imposed responsibility has been to merge student/teacher objectives with those of the local school

government; and to consolidate imposed curriculum, syllabus and texts with those relevant to student/teacher desired learning outcomes.

Another self-imposed responsibility has been to address the students' needs and vocational objectives. The Basic Skills in English classes are generally made available to students who are not college-bound. They are an alternative to the English classes which emphasize the study and interpretation of literature. Therefore, it was the writer's assumption that students enrolled in the Basic Skills classes would require a practical solution for their literacy requirements, and that those requirements should be vocationally-linked. The writer attempted to assist the students in developing a clear picture of their vocational goals, and then an objective understanding of their literacy strengths and weaknesses in relation to those goals.

CHAPTER II
STUDY OF THE PROBLEM

Problem Description

A situation which needed improvement in this setting was the meeting of vocational literacy objectives for non-college bound, graduating seniors. Although attempts had been made to assist students in developing clear vocational goals and in improving their literacy skills for those goals, the writer found that, ultimately, students did not achieve applicable, relevant language skills for their job objectives. Simply stated, the problem was that vocationally tracked high school students graduated with inadequate language skills to successfully compete in today's high-tech work force.

In four years teaching the Basic Skills in English course, the writer encountered a good deal of apathy from students who reported that they did not find their course work relevant to their

lives. In fact, the writer found (and data supports) that students who elected to take the Basic Skills in English (vocationally tracked students) seemed to express greater dissatisfaction with school than other students who were in college-bound, academically tracked classes.

When asked, students did not give conclusive answers to questions about their post-graduation plans. Many of them said that they would go on to vocational schools or community colleges, but were not certain of what career routes they would follow. Others contemplated military service in order to buy more time, to make career decisions and to receive the required training. Still others "just didn't know." Only a small proportion of students had well defined career objectives as well as clear strategies for achieving them.

In conferencing with other instructors of the Basic Skills in English course, this writer found that they too were dissatisfied with the county required curriculum and texts. They also found that their students lacked motivation with regard to curriculum format and materials. They expressed a desire to have a syllabus and related course materials/text which would assist students in developing career objectives and which would address their literacy requirements.

Parents also expressed their concern for their children's vocational preparedness. In conferences with parents of vocationally tracked students over the years, the writer found that parents' major concerns seemed to deal with how well prepared their children would be to compete in the work place.

Vocational counselors at this work setting also shared their concerns about students' vocational literacy skills keeping pace with changes in the work environment. Communication that counselors had with private industry spokespersons indicated a greater need for technical and service oriented literacy skills. Counselors did not see that change reflected in their students' language skills.

In summary, the dominant sentiment of the professionals and parents concerned was that vocationally tracked high school students graduated with inadequate language skills to successfully compete in today's high-tech work force.

Problem Documentation

In documenting the problem, three groups of data were investigated: school-wide, grade point averages of vocationally tracked students compared to college-bound students; surveys of one-hundred and fifty, randomly chosen students, their parents, and their employers measuring curriculum satisfaction; and school-wide, drop-out rate of vocationally tracked students compared to college-bound. It should be noted that the ratio of non-college bound to college-bound students, at this secondary school, is respectively about one to three. The following data gave evidence that the problem existed.

(1) Students, school-wide, who were vocationally tracked experienced fewer academic successes, as indicated by a mean grade point average of 2.0 (out of 4.0), compared to 3.1 for all others (See Table 1).

(2) Survey results of one-hundred and fifty randomly chosen vocationally tracked students, as well as a corresponding number of their parents and their employers, indicated that: of the one-hundred

and fifty students polled, 75% expressed a moderate degree of concern about their curriculum with respect to job preparedness; 20% revealed a high degree; and 5% said that they were satisfied. Parent surveys indicated similar data with 70% of the one-hundred and fifty expressing moderate concern; 20% indicating a high degree of concern; and 10% revealing satisfaction with curriculum as it related to job preparedness. Employers showed greater concern, with 67% of the one-hundred and fifty moderately concerned, 30% highly concerned and only 3% confident that students were being well prepared for the work place. Of the one-hundred and fifty surveys distributed to each - the student, parent, and employer; one-hundred and fifty, or 100% were completed and returned (See Table 2).

(3) Over the last five years, vocationally tracked students at this secondary school had an average drop-out rate of 7% compared to the school-wide drop-out rate of 4% (See Table 1).

Table 1

Mean Grade Point Average (GPA) and Drop-Out Rate of Vocational Compared to College-Bound Students, School-Wide.

	GPA(out of 4.0)	Drop-Out Rate
Vocational	2.0	7%
College	3.1	4%

Note. There is an inverse relationship between GPA and drop-out rate.

Table 2

Percentage of Concern/Satisfaction in Curriculum with Respect to Job Preparedness in 150 Surveys of Vocationally Tracked Students, their Parents and their Employers

		High Concern	Moderate Concern	Satisfied
Student	(n=150)	20%	75%	5%
Parent	(n=150)	20%	70%	10%
Employer	(n=150)	30%	67%	3%

Causative Analysis

To a large extent, vocationally tracked high school students did not have the language skills that they needed when they graduated to successfully compete in today's high-tech work force because educational objectives were not congruent with students' vocational needs. This analysis was further broken down into five causative areas.

(1) Students were not adequately assisted in setting vocational objectives. Prescribed course objectives for Basic Skills in English or any other language arts program did not include the investigation of students' vocational objectives. While attempting to build basic skills; students plowed generically through traditional spelling, grammar, syntax, composition, and comprehension exercises. Failure to investigate their vocational objectives left them without direction or vision and, therefore, without a plan.

(2) Required text books and curriculum for the Basic Skills in English courses were not relevant to students'

vocational needs. There were three required texts for each grade level: an anthology of assorted short stories, essays, plays and poetry; a workbook which reinforced anthology skills; and a grammar book. The curriculum generically targeted literature skills, reading skills, word attack skills, and composition skills. By the time students had got to their senior year, they had been through three years of "same old, same old." Getting students interested in developing skills which they struggled with for three or more years, and which were presented in repetitive fashion; was, for instructors, a challenge against great odds.

(3) Students engaged in reading and writing activities which were based primarily on passive question and response "product theory" models. The instructor posed a set of questions or directives for which there were prescribed "correct" answers or actions. Similar to the texts and curriculum, question format was repetitive. Students were not challenged, as they would be in the work place, to interact with, and respond instinctively to imposing problems. Instead, they were permitted to passively echo, in party-line fashion, previously deposited information. This did not emulate the processes that would be required of students when entering the work place. Literacy skills that would be called upon are those that would require the employee to take action extemporaneously - to respond to, and solve for, an ever-changing set of directives and problems.

(4) Students were not given sufficient opportunity to take an active role in their learning. They were products of the most widely practiced and accepted classroom methodology -

teacher as disseminator. In that arena, the instructor became the distributor of information rather than the facilitator for acquiring experience and knowledge. Once again, this model did not parallel the work situation, in which an employee is given a problem or task and expected to find a way to solve or accomplish it. Students in this teacher-oriented classroom were not given the opportunity to practice cooperative, team effort - a much valued skill in private industry.

(5) Students were not sufficiently exposed to technology which they would be required to use in private industry. Computers (particularly wordprocessors) were, unfortunately, not considered a major equipment requirement in the English classroom and, therefore, were not made a part of the budget. Although there was a wordprocessing lab at this work setting, classrooms, where English was taught, did not generally house computers. The lab was targeted for use by the higher phased, writing and literature classes. (It should be noted that the practicum implementer acquired a wordprocessing lab of twelve TRS-80's with software and three printers.) While the Basic Skills in English instructors accepted and saw a need for the use of computer hardware and software as a tool to better prepare their vocationally tracked students for a technology oriented work place, they also felt inadequate about using them. Therefore, even when given the opportunity to incorporate computers into a Basic Skills in English program, these technologically insecure teachers tended to shy away from this prospect.

Relationship of the Problem to the Literature

While there are many authors who have written about vocational literacy, Larry Mikulecky and Tom Sticht have done some of the most extensive research in the area. The work of Linda Flower and John Hayes has been at the forefront in the area of "problem-solving models" for language development. In use of technology in the classroom, Sylvia Weir has made major contributions. Johnson and Johnson delineate problems of the teacher-oriented classroom.

The above authors and others outlined several impacting factors of the problem, gave evidence supporting its existence and revealed several causal factors.

Impacting factors - Mikulecky (1988), Sticht (1960), Mikulecky & Drew (1988), and McCune (1986) have maintained that the work environment is rapidly changing, and that the amount and difficulty of the work seems to be increasing.

McCune (1986) has written that the transition from Industrial Age to Information Age has brought with it many changes in economic restructuring of the United States. She has added that among these changes are the nature of work (agricultural to service jobs), the energy driving society (from animal power to the

microprocessor), U.S. share of world trade (down from 20% in 1950 to 11% in 1980), forms of employment (increase in small and medium sized businesses - increase in level of skill required), and make-up of the work force (large entry of women and minorities). Finally, she has reported that along with economic restructuring, there have also been demographic shifts: baby-boomer factors, racial-ethnic factors, and changes in family patterns and sex roles.

Sticht has discussed "the decline in youth population and the increase in service and technology-related occupations, changing the nature of job skills requirements" (1960, p.2).

Research also revealed that there are "some significant differences between the literacy demands and competencies present in the workplace and those found in schools" (Mikulecky,1981, p.174). In a later study he has reiterated the existence of these differences (1987).

Supporting Evidence - A new generation of theorists (Bailey 1989; Bailey 1988; Bertrand and Noyelle 1988; and Noyelle 1989) have challenged the old post-World War II deskilling thesis of such industrial analysts as Braverman (1974), Bright (1958 and Levin (1987). Their research has shown, contrary to the deskilling theory, that the new technology will require workers to be more skilled - not less. They have found that this is due in part to the need to compete for consumers' hanging demands.

Furthermore, if changing literacy demands are not met, private industry will continue to suffer. The Wall Street Journal reported that it costs business millions to either replace workers or provide special training programs for them (Hymowitz, 1981).

Sticht (1978) in his study, also found that there is a "profound" need for better understanding of reading and writing requirements in vocational settings in order to better prepare workers.

Causal Factors - In looking to causal factors, Mikulecky (1988) has argued that "traditional schooling" leaves an "unfilled vacuum" in teaching functional literacy because **it does not focus on relevant technical material.**

Mikulecky and et. al., (1987) have further documented that reading which is done in the work environment is usually purposeful and results in some action; whereas **reading in the secondary school does not require the student to make decisions, problem-solve interactively or take any action.** Instead, the students maintain a passive, information-gathering relationship with their reading material.

In their work on cooperative learning in the classroom, Johnson (1980) and Johnson & Johnson (1988) found that **the traditional teacher-oriented, competitive classroom does not foster "positive interdependence," individual accountability, collaborative skills or processing abilities** - strengths needed to similarly acquire and use vocational language skills.

CHAPTER III

ANTICIPATED OUTCOMES AND EVALUATION INSTRUMENTS

Goals and Expectations

The following goals and objectives were projected for this practicum: The goal of the practicum is to prepare vocationally tracked high school students, with the literacy skills that they need, to successfully compete in today's high-tech work force.

Over a three month implementation period, **it is expected that** (1) practicum participants will demonstrate functional literacy relevant and applicable to specific vocational goals; (2) students, parents, and employers shall indicate confidence in curriculum with respect to job preparedness; (3) as a result of goal-specific successes, participating students shall experience a reduced drop-out rate and (4) a model curriculum for a vocationally relevant Basic Skills in English program shall be developed.

Behavioral Objectives

The writer expected to find three measurable changes in behavior at the end of the practicum.

1. Students would demonstrate a minimum increase of 20% on an index of functional literacy (CAPS aptitude test [Educational & Industrial Testing Service, 1979]).

2. Student, parent and employer surveys would indicate a minimum increase of 20% in confidence in curriculum with respect to job preparedness (See Appendices B-D).

3. Participating students would drop-out 30% less than those vocationally tracked students enrolled in Basic Skills in English classes but not involved in the practicum.

Measurement of Objectives

On day one of implementation, practicum participants were asked to complete a survey measuring confidence in curriculum with respect to job preparedness (See Appendix B). This twenty item survey took approximately ten minutes to complete in class. At that time, students received similar surveys (See Appendices C and D) to give to their respective parents and employers. They were asked to return them within the first week of implementation.

The same surveys were administered in like fashion on day sixty, the final day of implementation. Parent and employer surveys were similarly sent and completed.

On days two and three of the practicum students were given the Job-O 1985-1995 (Cutler, Ferry, Kaulk, &Robinett, 1987), a vocational interest survey which assisted students in making career decisions. Participants arrived at three possible career choices from which they were asked to choose one. Subjects repeated the survey in the final week of the practicum and once again arrived at three possible career choice from which they were asked to choose one.

Students were also given the CAPS aptitude test (Educational & Industrial Testing Service, 1979). This is a vocational aptitude

test (administered in a group) that is designed to test vocational ability. The test is comprised of eight subtests: mechanical reasoning, spatial relations, verbal reasoning, numerical ability, language usage, word knowledge, perceptual speed and accuracy, and manual speed and accuracy. This test was selected to fulfill two criteria. The first was to offer students an objective look at their vocational abilities with respect to their vocational interests. The second was to provide an instrument with which to measure language skill improvement over the duration of the program. On days four and five of the practicum, students were administered the eight CAPS subtests, each of which were timed for five minutes. On day sixty, the last day of implementation, the CAPS was readministered. However, because behavioral objectives included a measurable improvement in functional literacy, students were readministered only the three language subtests: verbal reasoning, language usage, and word knowledge. (Note, that the Cooperative English tests [Educational Testing Service,1960], originally proposed as an index of functional literacy, was not obtainable by practicum implementer.)

School drop-out records were reviewed at the end of the twelve weeks. Attrition rate of students involved in the practicum were compared to students enrolled in all of the other Basic Skills in English classes.

As a result of daily planning and record keeping as well as the statistical analysis of test and survey results, it was expected that a model curriculum for a vocationally relevant Basic Skills in English program would evolve.

Finally, a daily journal was kept, in which routine as well as unexpected occurrences were recorded. Student responses and comments, as well as the writer's insights and perceptions were also recorded.

CHAPTER IV
SOLUTION STRATEGY

Discussion and Evaluation of Solutions

Solutions to the practicum problem, vocationally tracked high school students graduate with inadequate language skills to successfully compete in today's high-tech work force, were examined and evaluated in terms of those offered by the literature.

Mikulecky and Sticht (1980) explained that basic English skills for the work setting could be improved when materials applicable to that setting are used.

Flower and Hayes' (1984) "Cognitive Process Theory" and Flower's (1988) "Reading-to-Write Theory" was offered by Mikulecky and et. al., as a useful "model that could be adapted to develop a job literacy problem-solving model..." (1987, p.2). Flower (1988) proposed the theory of "task representation" as an interpretation process in which readers may be given task choices, likened to computer icon choices, in order to plan, organize and

compose their writing. Mikulecky et. al., (1987) suggested that such theories of reading and composition could be used in the classroom, and then applied to workplace literacy.

Imel (1989) agreed with Mikulecky et. al., (1987) in the area of problem-solving and decision-making; she offered six solutions to the problem of vocational literacy. They were: (1) more communication between education and private industry; (2) better publicity for vocational education; (3) the teaching of basic skills such as English in the vocational areas; (4) the instruction of useful generic vocational skills such as decision-making and problem-solving; (5) more on-the-job training; (6) emphasis on "applied" basic skills.

Hunter and Aiken (1987) also agreed that problem-solving activities could be an important aspect of vocational literacy programs. They urged educators to incorporate these, and the development of communication skills, into vocational instruction. Moore (1978) concurred that combining literacy with career development is both logical and feasible.

The Educational Testing Service (1989) directed a team of researchers to focus on the needs of adults and young adults in the area of workplace literacy. The three major solutions which they posed were (1) a computer-based assessment system for individuals with average literacy skills; (2) a job-based assessment of literacy skills needed in a particular workplace; and (3) the establishment of literacy requirements for the fastest growing job markets now and into the twenty-first century.

McIlvoy (1989) asserted that vocational educators could help solve the literacy problem; and , like Johnson (1987) suggested that the methodology should include collaboration and cooperation. Johnson (1987), in addressing human relations and vocational objectives, indicated that if the teacher acted as facilitator towards achieving "positive interdependence" between the students, they would develop skills much valued for the work force: interaction, accountability, collaboration and processing. His assumptions were two-fold: (1) that without these skills, literacy acquirements could not be applied and (2) that positive interdependence could be a tool with which vocational literacy would be better achieved.

In sync with the Johnson and Johnson (1988) model of cooperative learning; Johnson, Johnson and Male (1986) and Johnson, Johnson and Stanne (in press-a, in press-b) found that the use of computers in the classroom could allow the instructor to incorporate technological, vocational, and interpersonal literacy. The former summarized that "The technology of computers and the interpersonal interaction promoted by cooperative learning provide complementary strengths. It is a partnership that maximizes the advantages of each instructional strategy" (p. 12).

Finally, in support of the use of the microcomputer as a teaching tool, Weir (1989) stated that "Giving students the freedom to mess about and 'play' in appropriately structured computer-based environments provides a stage upon which they can develop their own goals and have experience in choosing and working to realize them" (p. 17).

The literature posed provocative solutions to the practicum problem as well as generated new ones for the writer. In summary, ten such solution-ideas included (1) computer literacy skills, word-processing and tele-communications as part of the Basic Skills in English methodology and curriculum; (2) students being assisted and given the opportunity to set vocational objectives in order to focus on relevant material for their job settings; (3) required texts being modified, and additional relevant materials being introduced and adapted to students' needs; (4) students being encouraged to participate in and incorporate relevant materials into course work; (5) students being encouraged to actively participate in their own technological, vocational and interpersonal skill building vis-a-vis the Johnson and Johnson (1987, 1988) model of cooperative learning; schools and private industry being more closely aligned; (6) more on-the-job training; (7) the teaching of basic skills in the vocational areas; (8) better publicity for vocational education; (9) the development of a viable vocational literacy assessment system; and (10) the establishment of literacy requirements for future growing job markets.

The writer considered all of the above ideas to be applicable and viable solutions to the practicum problem. However, not all of them were possible or practical, given the implementer's work setting and powerbase. For example, although the teaching of basic literacy skills within the vocational areas, had proven to be beneficial; the implementer's powerbase did not permit such a solution. Furthermore, ETS' (1989) ideas for developing assessment systems and specifically tailored literacy requirements were well

documented as being on-target; however, those solutions were beyond the scope of this practicum.

The kinds of solutions to the practicum problem which were both relevant and plausible were those that had proven successful in the past and that could be implemented in the English classroom. Also pertinent to the choosing of practicum solutions were the writer's comfort and familiarity with the implementation of those solutions. For example, the writer is experienced in the use of the microcomputer as a teaching tool, and felt comfortable implementing a computer-related solution to the practicum problem. The writer is also adept at facilitating a cooperative learning environment in the classroom; therefore the use of that model was another proven practical approach the writer implemented. The writer has worked extensively with the reading-to write approach and with adapting and supplementing required texts with vocationally relevant materials; therefore, the writer also felt capable of applying decision-making and problem-solving models to suitable literacy materials.

Description of Selected Solutions

The following practical, proactive solution-strategies were chosen to address the practicum problem. These solutions were based on sound suggestions posed by, and generated from, the literature as well as a determination to remain within the domain of the implementer's powerbase and specific professional experience.

(1) Students would work towards establishing vocational objectives in order to better focus on specific literacy requirements. Without the student's understanding of career direction, there would be no effective way of achieving relevant vocational literacy. In this way, the writer believed that the students would view what they were doing in the classroom as relevant to their career objectives.

(2) Materials and texts would be modified and adapted to students' specific vocational needs. After a clear picture of career direction had been established, literacy activities would be modified to accommodate work-related literacy requirements. This would be achieved by accessing resource materials and persons from various work settings. In so doing, it was expected that

students would be better motivated to do well in the class and achieve the basic skills required for their job objectives.

(3) Problem-solving and decision-making models of job-literacy, such as Flower and Hayes' (1984) "Cognitive Process Theory" and Flower's (1988) "Reading-to-Write Theory," would be employed. These models would be implemented using the materials acquired in the previous solution-strategy which dealt with acquiring relevant literacy materials. Employees are expected to problem-solve and make sound on-the-job judgements daily; therefore, skill-building activities in the classroom should be process, rather than product, oriented. Hence, it was hoped that students would not only view what they were doing in the classroom as relevant to their career objectives, but that employers would also begin to see an increase in student initiative and autonomy.

(4) Johnson (1980) and Johnson & Johnson's (1988) "Cooperative Learning Theory" should be put into practice. The ability to cooperate, collaborate and communicate are highly valued skills in the work setting. It has been proven that the cooperative learning models abet the acquisition of these skills. While developing interpersonal skills, cooperative learning would also serve as a vehicle for building vocational literacy skills. Secondarily, students would feel greater affinity to their groups, their class and possibly their school - hence it was hoped that there would be few incidences of drop-out.

(5) Computer literacy skills, word-processing and tele-communication would be incorporated into the Basic Skills in English curriculum. Technology is not only an important aspect of the work arena, but it has also proven to be an intrinsic aspect of classroom methodology. Combined with cooperative learning models, the incorporation of the computer in a vocational literacy program would build students' technological, vocational and interpersonal skills.

Report of Action to be Taken

The following problem-solving steps were taken in which the issues of job literacy for the vocationally tracked student at this high school were addressed.

(1) Target subjects were comprised of the students who enrolled in the two Basic Skills in English classes available to seniors. There were forty students: twenty-four young men and sixteen women. The racial/ethnic ratio were approximately four to one, whites to blacks, respectively.

(2) Permission from administration, parents, employers or students were obtained when and where necessary. For example, it was necessary to obtain administrative permission to conduct the surveys. It was also necessary to employ the assistance of the school's occupational specialist to administer the Job-O 1985-1995 (1987) and CAP (1979). Letters to parents and employers accompanied the surveys, requesting their assistance. Finally, although the practicum was part of the Basic Skills in English class, a request for students' cooperation and participation was also requested and obtained.

(3) With the exception of the occupational specialist, as mentioned above, the implementer/writer acted as administrator, facilitator and monitor of the practicum.

(4) A comprehensive intervention plan was designed in which the afore-mentioned solution-strategies were implemented over a twelve week period according to the following time-line.

Week 1 -

Objectives: To orient the students to elements and purpose of the practicum, and to gather entrance data.

Materials - Student, parent and employer surveys, CAP Test (1979); Job-O (1987).

Procedures - Elements and general purpose of the practicum were discussed. Surveys; CAP Test (1979); and Job-O were administered (results were be shared with the subjects).

Week 2 -

Objectives - To acquaint students with cooperative learning and to give them experience in participating in this model while focussing on making the commitment to stay in school.

Materials - Johnson & Johnson's (1988) Cooperation in the classroom; and the film Dropping Out: Road to Nowhere (1989).

Procedures - Implementer facilitated selected cooperative learning activities from the above text in order to orient students to the model and give them experience in participating in it. These activities allowed students to respond to the film about staying in school.

Week 3 -

Objectives - To give students the opportunity to cooperatively explore and establish career objectives and attitudes.

Materials - Johnson's (1987) Human relations and your career; and the film Are You Ready? (1990).

Procedures - Implementer facilitated selected cooperative learning activities from the above text in order to give students the opportunity to cooperatively explore and establish career objectives and attitudes. Above mentioned film was used as the basis for discussion and activities.

Week 4 -

Objectives - To orient students to the micro-computer and wordprocessing program and to assist students in developing a plan to achieve their short term and long term goals.

Materials/Equipment - LeScript II wordprocessing software; LeScipt II Manual (1989); TRS-80 computers and output device.

Procedures - Instruction in the fundamentals of the microcomputer was facilitated and hands-on experience with LeScript wordprocessing software was permitted, by allowing students to outline a plan to achieve their short term and long term goals.

Week 5 -

Objectives - To concurrently build students' technology, language and collaborative skills.

Materials/Equipment - Johnson, Johnson, & Male's (1986) Cooperative learning and computers: An activity guide for teachers; LeScript II wordprocessing software; LeScipt II Manual (1989); TRS-80 computers and output device.

Procedures - Implementer facilitated selected wordprocessing activities, from above text and software manual; students were given the opportunity to interact collaboratively with one another and with the computer while building language skills.

Week 6 -

Objectives - To refocus on and evaluate identity, career and life goals using the Johnson (1987) model.

Materials - Johnson's (1987) Human relations and your career and the U.S, Department of Labor (1984-1985 ed.) Occupational Outlook Handbook.

Procedures - Implementer facilitated selected interpersonal activities, from Johnson text, which gave students the opportunity to further explore their identities and their social roles as they compared to their career objectives. Department of Labor handbook was used as a reference book to give students further insight into their career choices.

Week 7 -

Objectives - To assist students in developing literacy and communication skills relevant to their respective vocational objectives.

Materials - Vocational resources accessed by students from their employers and/or vocational instructors such as on-the-job vocabulary, written directions, aural directions and scenarios which required some problem-solving action or response.

Procedures - Students worked in peer groups of the same or similar job objectives. They shared individually accessed resource materials with one another and discussed their vocational relevancy.

Group and individual folders were kept, containing those materials which were deemed vocationally relevant by the groups.

Week 8 -

Objectives - To strengthen job-specific reading and writing skills vis-a-vis the Flower's (1988) reading-to-write, model.

Materials/Equipment - Student-deemed, vocationally-relevant materials accessed and retained during week seven's activities; Department of Labor (1984-1985 ed.) Occupational Outlook Handbook; LeScript II wordprocessing software; LeScipt II Manual (1989); TRS-80 computers and output device.

Procedures - Using group-folder materials, the Department of Labor handbook and the Flower's (1988) model, implementer developed and facilitated cooperative, process-oriented, reading-to-write activities. Career specific vocabulary was selected. Students continued to work in vocationally homogeneous groups.

Week 9 -

Objectives - To strengthen job-specific vocabulary and word-attack skills vis-a-vis the Johnson (1988) cooperative learning model.

Materials - Student-deemed, vocationally-relevant materials accessed and retained during week seven's activities; the Department of Labor handbook and Johnson & Johnson's (1988) Cooperation in the classroom.

Procedures - Using group folder materials, Department of Labor handbook and Johnson's (1987) "jigsawing strategy," implementer developed and facilitated vocabulary and word-attack activities. Students continued to work in vocationally homogeneous groups.

Week 10 -

Objectives - To give students the opportunity to ask questions and exchange ideas with employers (other than their own) about their vocational literacy expectations.

Materials - Various resource persons from private industry, representing career choices which predominated among the students.

Procedures - Local employers, representing career choices which predominated among the students, individually presented their vocational literacy concerns and expectations to the students. A panel discussion followed, in which students and employers representing each of the career areas posed questions to one another and exchanged ideas. The remainder of the week was devoted to synthesizing the presentations and panel discussions; students worked in their vocationally homogeneous groups, creating and filing additional vocationally relevant information in their "vocational materials folders."

Week 11 -

Objectives - To assist students in synthesizing and generating a written report about the cooperative skill-building and problem-solving experiences which they encountered in the prior ten weeks, and in evaluating their own job preparedness with respect to vocational literacy.

Materials/Equipment - Information generated from group "vocational materials folders;" LeScript II wordprocessing software; LeScipt II Manual (1989); TRS-80 computers and output device.

Procedures - Utilizing the skills which the students worked to build during this implementation period (cooperation, collaboration, and

vocational and computer literacy), the vocationally homogeneous groups produced written syntheses of the practicum as it related to vocational literacy and job-preparedness.

Week 12 -

Objectives - To achieve closure and obtain exit data.

Materials - Group synthesis reports; student, parent and employer surveys, CAP Test (1979), and JOB-O (1987).

Procedures - Groups presented synthesis reports. Implementer recapitulated the elements and general purpose of the practicum. Surveys; CAP Test (1979), and JOB-O (1987) were administered.

(5) Follow-up activities, were done in accordance with the project out-come.

CHAPTER V
RESULTS, DISCUSSION AND RECOMMENDATIONS

Results

The following strategies were implemented to solve the practicum problem, vocationally tracked high school students graduate with inadequate language skills to successfully compete in today's high-tech work force:

1) Students were assisted in establishing their vocational objectives in order to focus on specific literacy requirements; 2) texts and materials were modified and adapted to students' specific vocational needs; 3) problem-solving and decision-making models of job-literacy were employed; 4) cooperative/team learning strategies were implemented; and, 5) computer literacy and applications were incorporated into a Basic Skills in English curriculum.

The following three measurable changes in behavior were expected to be found at the end of the practicum.

1. Students would demonstrate a minimum increase of 20%. on an index of functional literacy (Cooperative English tests [Educational Testing Service,1960]).

2. Student, parent and employer surveys would indicate a minimum increase of 20% in confidence in curriculum with respect to job preparedness (See Appendices B-D).

3. Participating students would drop-out 30% less than those vocationally tracked students, enrolled in Basic Skills in English classes, but not involved in the practicum.

The first objective was measured by administering the CAPS aptitude test (Educational & Industrial Testing Service, 1979) to all of the subjects. On days four and five of the practicum, students were administered the eight CAPS subtests, each of which were timed for five minutes. On day sixty, the last day of the implementation, students were given only the three language subtests: verbal reasoning, language usage, and word knowledge. Results were as follows:

Table 3

Percentage of Deltas Between Means of Entrance and Exit Scores of Language-Related Subtests of the CAPS

	M of Entrance	M of Exit	Percent of Delta
Verbal Reasoning (out of 9)	3.3	3.8	1.2%
Language Knowledge (out of 9)	3.0	3.3	1.1%
Word Use (out of 9)	2.9	3.5	1.2%

The second objective was measured in three ways: 1) delta of all-item totals on entrance and exit surveys; 2) delta of only items six through twelve totals (those items directly related to language skills [see Appendices B-D]) on entrance and exit surveys; 3) delta of item twenty (subjects' understanding of qualifications [see Appendices B-D]) on entrance and exit surveys. These three scores were calculated for each: the student surveys, the parent surveys, and the employer surveys. Results were as follows:

Table 4

Percentage of Deltas Between Means of Student, Parent and Employer Entrance and Exit Surveys

	M of Entrance	M of Exit	Percent of Delta
Student Surveys			
All Items (out of 100)	64.3	65.8	1.02%
Items 6-12 (out of 35)	25.7	26.5	1.03%
Item 20 (out of 5)	4.4	4.4	0.00%
Parent Surveys			
All Items (out of 100)	61.4	66.8	1.08%
Items 6-12 (out of 35)	24.7	25.8	1.04%
Item 20 (out of 5)	3.9	4.1	1.05%
Employer Surveys			
All Items (out of 100)	68.4	70.5	1.03%
Items 6-12 (out of 35)	28.5	27.7	.97%
Item 20 (out of 5)	4.0	4.2	1.05%

The third objective was measured by reviewing school drop-out records at the end of the twelve weeks. Attrition rate of students involved in the practicum were compared to students enrolled in all of the other Basic Skills in English classes. Results were as follows:

Table 5

Percentage of Student Drop-Out in the Basic Skills in English Classes

	N Enrolled	N Completed	Drop-Out Percentage
10th Grade	34	31	9%
11th Grade	42	38	10%
12th Grade *	40	38	5%

*Note: 12th grade classes constituted practicum subjects only.

Not included in the objectives of this practicum, but an interesting result, was the number of students who made a different career choice on the vocational interest survey, Job-O 1985-1995 (Cutler, Ferry, Kaulk, &Robinett, 1987) the second time they took it. At the start of the program they arrived at three possible career choices from which they chose one. When subjects repeated the survey in the final week of the practicum, 50% of the students arrived at a different career choice.

The last week of the program, students were asked to write a synthesis by responding to the following questions: 1) What do you think was the purpose of this program? 2) What skills did you obtain from participating in this program? 3) In what ways was this program useful? 4) What about this program would you change? Overwhelmingly, the students believed that the purpose of the program was to help them gain insight and understanding into career possibilities. They also saw the "skill obtained" as being the career research abilities they acquired. In terms of program usefulness, the students primarily focussed on how their improved understanding of particular careers would help them to prepare for those careers when they graduated. A few students felt that they had increased their computer skills. The only change suggested, by the majority of the students, was that of making the twelve week course into a full year. Some students even recommended that all of their classes be vocationally focussed.

Finally, as a result of daily planning, record keeping, the statistical analysis of test and survey results, as well as the keeping of a daily journal in which routine as well as unexpected occurrences were recorded, a model curriculum for a vocationally relevant Basic Skills in English program evolved.

Discussion

There were positive measurable changes in practicum participants' behavior. Functional literacy test scores, surveys and drop-out rate all showed improvement, albeit short of what predictions indicated. Possible causes for only a slight improvement of functional literacy and survey scores due to practicum strategies will be discussed, as will the decreased drop-out rate.

It is believed that the CAPS aptitude test (Educational & Industrial Testing Service, 1979) may not have adequately measured language skills that were acquired as a result of practicum strategies. Because subjects focussed on language skills specific to their career choices, the use of a generic instrument may not have been appropriate or effective.

It is further proposed that surveys, for the most part, indicated only a one percent increase in skill confidence because subjects, when presented with many career options and information, waivered in their career direction. As indicated by the Job-O 1985-1995 (Cutler, Ferry, Kaulk, &Robinett, 1987) and the fifty percent change in career choice, practicum subjects were not entirely focussed on a single career. This is attributed to the short period of

time over which this practicum was implemented. Students, for whom this had been the first exposure to career information and selection, were overwhelmed with the amount of information and the number of job possibilities available. For a student who had never done career research; twelve weeks may not have been enough time to have made a career choice, developed literacy skills in that career area, and then developed confidence about job-preparedness.

External validity of parent and employer survey results may also be questioned, due to the fact that students' were responsible for getting surveys to and from their cooperating parents and employers. Implementer, therefore, could not control survey conditions.

Although there was only a four percent difference in the drop-out rate between practicum students and other Basic Skills in English students, it is believed that that difference is significant, given the overall low drop-out rate during the first twelve weeks of the school year. Finally, responses from students, in their syntheses, were positive, indicating good motivation.

The five solution-strategies posed by the literature, and chosen by the writer, proved successful. Again, although the degree to which the writer predicted increases in behavior would occur was not realized in this practicum; there were positive results, indicating similar findings as those of the literature.

For example, the first solution-strategy suggests that in order to better focus on specific literacy requirements, students should work towards establishing vocational objectives. This was a strategy supported by, and congruent with, the work of Mikulecky

and Sticht (1980), who believe that basic English skills for the workplace can be improved when materials applicable to a particular vocational setting are used.

Results also support the second solution-strategy of this practicum suggested by Mikulecky and Sticht (1980), that materials and texts should be modified and adapted for the students' specific vocational needs.

Problem-solving and decision-making models of job-literacy, as posed by Flower and Hayes (1984) proved a valuable solution-strategy, as did the Johnson (1980) and Johnson & Johnson (1988) "Cooperative Learning Theory." When implemented together, these strategies simulated hypothetical, on-the-job, literacy demands.

Finally, students looked forward to "messing about and playing," as Weir (1989) supports, with computers. It not only gave them valuable and practical technological experience, but it also gave them a more palatable approach to communicating on paper.

Recommendations

The recommendations of this writer echo those of the students: the program should be extended, not simply to a year-long course but into a three year curriculum that would encompass all of the elements only touched upon in this snapshot-practicum. As discussed above, it is believed that objectives were only marginally met, due to the brevity of each of the program's components.

Results found in the literature, as well as in this practicum, indicate that career exploration, vocational literacy development and the subsequent application of those literacies to the enhancement of job-preparedness are the primary components, intrinsic to a comprehensive basic English course for the vocationally-tracked high school student. They, furthermore, point to the importance of integrating basic English and vocational education, making the study of each particularly relevant.

It is also recommended that greater specificity be applied to the testing of desired learning outcomes. That is, rather than administering a generic instrument to test language skills, one specific to particular vocational literacies should be developed and used.

Students would greatly benefit from more exposure to the workplace than was afforded in the scope and time frame of this practicum. Future such programs should include more varied and frequent visits to specific job-sites. Cooperation and collaboration between industry and school would be necessary.

The wordprocessing component of this practicum proved beneficial to the acquisition and application of basic English skills; however, it is believed that students would gain greater benefit from hardware and software which was more closely aligned with industry standards. It is also suggested that computer-aided-instruction be introduced as another instrument for strengthening vocational literacy skills; and that the instruction be tailored, along with the curriculum, for career literacy.

Further study in the area of vocational literacy is needed. Future investigation should explore 1) including career exploration, vocational literacy development and the subsequent application of those literacies into a three year comprehensive basic English course for the vocationally-tracked high school student; 2) developing and administering a language skills test which measures specific desired learning outcomes of vocational communication; 3) developing collaborative relationships between school and private industry in order to afford the students greater exposure to the workplace; 4) using industry-standard hardware and software; and 5) introducing computer-aided-instruction tailored to career literacy.

Practicum results were disseminated at the 1991 National Reading Resource Conference; additional presentations are planned.

References

Anitek Software Products (1989). LeScipt II Software Manual. Melbourne, FL: Anitek Software Products.

Bailey, T. (1989). Changes in the nature and structure of work implications skill requirements and skill formation. NY: National Center, on Education and Employment, Teachers College, Columbia University.

Bailey, T. (1988). Education and the transformation of markets and technology in the textile industry. (Tech. Paper No. 2). NY: National Center on Education and Employment, Teachers College, Columbia University.

Bertrand, O. & Noyelle, T. (1988). Human resources and corporate strategy: Technological change in banks and insurance companies of five OECD countries. Paris: Organization for Economic Cooperation and Development.

Braverman. H. (1974). Labor and monopoly capital: The degradation of work in the twentieth century. New York: Monthly Review Press.

Bright, J. (1958, July/August). Does automation raise skills requirements? Harvard Business Review. 36 pp. 85-98.

Cutler, C., Ferry, F., Kaulk, R., & Robinett, R. (1987). Job-O 1985-1995. Meadow Vista, CA: CFKR Career Materials.

Educational & Industrial Testing Service. (1979). Career Ability Placement Survey. San Diego, CA: EdITS.

Educational Testing Service. (1989). Adult literacy: Helping Americans with mid-level skills prepare for the high-level demands of tomorrow. ETS Developments, 34(4), 5-7.

Flower, L. (1988). The role of task representation in reading-to-write: exploring a cognitive and social process series. (Tech. Rep. No. 2). Washington, DC: Office of Educational Research and Improvement.

Hayes, J. & Flower, L. (1984). A cognitive model of the writing process in adults, (Final Report). Washington, D.C: National Institute of Education.

Hunter, B. & Aiken, R. (1987). The Evolution of Computer Courses in Vocational Education: Perspectives and direction. Technological Horizons in Education, 14 (7), 54-57.

Hymowitz, C. (1981, January 22). Employers take over where schools failed to teach the basics: The Wall Street Journal, pp. 1.

Imel, S. (1989). Employers' expectations of vocational education. Washington, D.C: Office of Educational Research and Improvement.

Johnson, D., Johnson, R., & Stanne, M. (in press). Computer assisted instruction: A comparison of cooperative, competitive, and individualistic goal structures, American Education Research Journal.

Johnson, D. & Johnson, R. (1988) Cooperation in the classroom. Edina, MO: Interaction Book Company.

Johnson, D., Johnson, R, & Male, M. (1986). Cooperative learning and computers: An activity guide for teachers. (3rd ed.). Edina, MO: Interaction Book Company.

Johnson, D. (1980). Group processes: Influences of student-student interactions on school outcomes. In J. McMillan (Ed.), Social Psychology of School Learning. New York: Academic Press.

Johnson, D. (1987). Human relations and your career. (2nd ed.). Englewood Cliffs, NJ: Prentice Hall.

Johnson, D., Johnson, R., & Stanne, M. (in press). The effects of cooperative, competitive, and individualistic goal structures on computer-assisted instruction. Journal of Education Psychology.

Levin, H. (1987). Improving productivity through education and technology, in The future impact of technology on work and education, Burke, G. & Rumberger (Eds.). New York: The Falmer Press.

McCune, S. (1986). Guide to strategic planning for educators. Aurora: Association for Supervision and Curriculum Development.

McIlvoy, N. (1989, April). Literacy is hot. Vocational Educational Journal, 64(3), 20-23.

Mikulecky, L. (1987). Investigating a process model of literacy in the workplace. Bloomington, IN: Indiana University.

Mikulecky, L. (1988). Literacy for the workplace. Bloomington, IN: Indiana University.

Mikulecky, L. (1981). The mismatch between school training and job literacy demands. Vocational Guidance Quarterly, 30(2), 174-80.

Mikulecky, L. et al., (1988). Training for job literacy demands: What research applies to practice. State College, PA: Pennsylvania State University, University Park Institute for the Study of Adult Literacy.

Mikulecky, L. & Drew, R. (1988). The work education bridge. Bloomington, IN: Indian University.

Moore, A. (1978). Relating literacy development to career development. Adult Literacy and Basic Education, 2(3), 190-200.

Noyelle, T. (1989). Skill needs and skill formation in accounting, management consulting and software. (Tech. Paper). NY: National Center, on Education and Employment, Teachers College, Columbia University.

Sticht, T. & Mikulecky, L. (1984). Job related basic skills: Cases and conclusions. Washington, DC: National Institute of Education.

Sticht, T. G. (1980). Literacy and vocational competency. Columbus, OH: Ohio State University National Center for Research in Vocational Education.

Weir, S. (1989, February). The computer in schools: Machine as Humanizer. Harvard Educational Review, 59(1) 13-25.

APPENDIX A

BASIC SKILLS IN ENGLISH IV CURRICULUM

INTRODUCTION - ENGLISH SKILLS IV

English Skills IV includes standards and objectives to prepare students for entry into the post-high school world. Although emphasis continues to be placed on vocabulary development, writing proficiency, reading comprehension, and oral skills, the English Skills IV curriculum also includes instruction in the development of the English language and in the content and techniques of modern media. Students will become familiar with research procedures needed to write a short documented paper. Writing instruction will focus on practical applications such as the resume, business letter, and brief report using numerical data. Similarly, oral practice will emphasize career-related applications such as interviews, sales or telephone use.

ENGLISH SKILLS IV (1001390)

In order to receive credit for the course, the student must demonstrate mastery of at least 70% of the student performance standards identified for the course. Mastery is determined by the teacher, based upon teacher observation, tests, assignments, products, or other commonly accepted means of evaluation.

After successfully completing this course, the student will be able to

1. Use selected vocabulary.

   The student will
   - 1.01 determine word meaning from context clues.
   - 1.02 use selected grade level vocabulary for writing.
   - 1.03 apply dictionary skills to determine definitions, spelling, and parts of speech.
   - 1.04 identify prefixes, suffixes, and base words to determine word meaning.
   - 1.05 identify synonyms, antonyms, and homonyms.
   - 1.06 spell words from the Florida Lists for Assessment of Spelling (FLAS).

2. Apply knowledge of grammar, spelling, usage, and mechanics to written composition.

   The student will
   - 2.01 apply the fundamental conventions of standard written English: capitalization, mechanics, usage, spelling.
   - 2.02 experiment with a variety of sentence structures appropriate to the writing task.
   - 2.03 edit the content of writing products for a purpose.
   - 2.04 use proper manuscript form.
   - 2.05 proofread writing products for grammar, mechanics, usage, and spelling.

3. Write for various purposes and audiences using all stages of the writing process.

   The student will
   - 3.01 complete forms, write business letters, and a personal resume.
   - 3.02 write summaries of written and oral information.
   - 3.03 write more than one paragraph on a single topic.
   - 3.04 experiment with creative writing (poem, story, personal essay, and/or play.
   - 3.05 write conclusions based upon an evaluation of conflicting information.

4. Use reference skills to write a short documented paper.

   The student will
   - 4.01 select a subject and narrow it to a reasonable topic.
   - 4.02 use basic resource materials to locate information.
   - 4.03 use basic resource materials to write notes necessary for a documented paper.
   - 4.04 write a general outline for a documented paper.
   - 4.05 write a first draft of a documented paper.
   - 4.06 revise and edit the first draft of a documented paper.
   - 4.07 write and edit subsequent drafts of a documented paper, as necessary.
   - 4.08 complete a final draft of a documented paper.

5. Apply knowledge of elements of literary genres to selections from British and other appropriate literature.

   The student will:
   - 5.01 read assigned literary selections that are representative examples of major genres in British and other appropriate literature.
   - 5.02 respond to, evaluate, and interpret assigned literary elements.
   - 5.03 discuss specific selections in terms of literary elements.
   - 5.04 identify the different genres by specific literary characteristics.
   - 5.05 Identify important British and other writers of literature.
   - 5.06 Relate themes and ideas found in representative works to personal experience.

6. Use speaking skills for a variety of purposes and audiences.

   The student will:
   - 6.01 deliver a speech from an outline using effective verbal and nonverbal techniques.
   - 6.02 report individually or in a group on a given literary work.
   - 6.03 read a self-produced composition to the class, using effective verbal communication skills.
   - 6.04 participate in formal discussions of student work.
   - 6.05 practice nonverbal communication.

7. Analyze media presentations in terms of content and technique.

   The student will:
   - 7.01 compare/contrast an audio-visual presentation to a literary work.

7.02 write a summary or critique of a movie or television program related to British literature.
7.03 identify propaganda techniques used in television, newspapers, magazines, and/or radio.
7.04 establish and use criteria to evaluate a news story, television program, magazine article, novel, or short story.

8. Recognize fundamental aspects of the development of the English language.

8.01 discuss how language reflects the changes in a culture or people.
8.02 give examples of commonly used English words which are borrowed from other languages.
8.03 differentiate among slang, dialects, regionalisms, and standard usage.

Sample Syllabus - English Skills IV

READING/LITERATURE	WRITING	LANGUAGE SKILLS	REINFORCEMENT	SIX WEEK PERIOD
Overview of text; "Impressions" unit of Findings Strategies Ch. 1 "Sentence Meaning," Ch. 5 "Main Idea," Ch. 12 "Study Skills"	The writing process, with emphasis on prewriting, main idea and sentence structure; writing paragraphs of personal narrative	Sentence parts; using a glossary; punctuation marks; synonyms & antonyms	Thunder on Sycamore Street (drama, pp.508-539) - read aloud or tape on cassette	1
"Ventures" unit of Findings; Ch. 3 "Judgments" of Strategies	Write using spatial order, time order, cause and effect or comparison/contrast.	Figurative language; sentence combining; context	The Kid Nobody Could Handle (drama, pp. 435-449) ; show film "The Boy Who Liked Deer"	2
"Quest" unit of Findings; Ch. 2 "Relationships" in Strategies	Write paragraphs dealing with point of view; write summaries of oral information; write a persuasive essay (see p. 220)	Fact & Opinion; Making generalizations; Verb forms & usage	Read supplemental novel in paperback (The Man Who Never Was), with projects	3
"Poetry" unit in Findings; Ch. 10 "Figurative Language" & Ch. 11 "Imagery of Strategies	Creative writing (poetry); write paragraphs to evaluate poems	Vocabulary; Tone; Oral skills	Oral interpretation, using cassette recorder; film: "Taming of the Shrew"	4
"Changes" unit of Findings; Ch. 4 "Inferences" of Strategies	write letters; take notes; cite sources; emphasis on thesis support	Inferences; Thinking skills; Irony & Satire; Outlining	Read supplemental novel in paperback (To Sir With Love), with activities	5
"Treasures" unit in Findings; Ch. 12 "Study Skills" in Strategies	Resume for job application; Forms; report writing from numerical data; self-evaluation of writing skills	Oral skills needed for interviews, sales, etc.; persuasive techniques used in speaking & advertising	Formal speech or demonstration	6

TEXT REFERENCES: Journeys, Findings, Harcourt Brace Jovanovich
Strategies in Reading F, Harcourt Brace Jovanovich
Basic Skills in English, Book 6, McDougal, Littell

SUPPLEMENTAL BOOK LIST

English Skills IV

Phase 2

LISA, BRIGHT AND DARK, Neufeld
TREASURE ISLAND, Stevenson

Phase 2-3

CHRONICLES OF NARNIA, Lewis
THE MAN WHO NEVER WAS, Montagu
TO SIR WITH LOVE, Braithewaite

Note. From Secondary Language Arts Curriculum (pp. 169-174) by C. Bencich, et.al., Rockledge, FL: School Board of Brevard County. Reprinted by permission.

APPENDIX B

STUDENT SURVEY OF CONFIDENCE IN JOB PREPAREDNESS

STUDENT SURVEY OF

CONFIDENCE IN JOB PREPAREDNESS

Student's Name:_____

Please respond to the following statements by indicating how strongly you agree or disagree with them. For example:

5 indicates strong agreement

4 indicates some agreement.

3 indicates neither opinion.

2 indicates some disagreement.

1 indicates strong disagreement.

Please circle the number which best describes you.

1. If I graduated tomorrow, I am capable of working at a job that requires mechanical skills. 1 2 3 4 5
2. If I graduated tomorrow, I am capable of working at a job that requires electrical skills. 1 2 3 4 5
3. If I graduated tomorrow, I am capable of working at a job that requires electronic skills. 1 2 3 4 5
4. If I graduated tomorrow, I am capable of working at a job that requires science skills. 1 2 3 4 5

5. If I graduated tomorrow, I am capable of working at a job that requires math skills. 1 2 3 4 5

6. If I graduated tomorrow, I am capable of working at a job that requires computer skills. 1 2 3 4 5

7. If I graduated tomorrow, I am capable of working at a job that requires writing skills. 1 2 3 4 5

8. If I graduated tomorrow, I am capable of working at a job that requires reading skills. 1 2 3 4 5

9. If I graduated tomorrow, I am capable of working at a job that requires speaking skills. 1 2 3 4 5

10. If I graduated tomorrow, I am capable of working at a job that requires telephone skills. 1 2 3 4 5

11. If I graduated tomorrow, I am capable of working at a job that requires keyboard skills (typing or wordprocessing). 1 2 3 4 5

12. If I graduated tomorrow, I am capable of working at a job that requires filing skills. 1 2 3 4 5

13. If I graduated tomorrow, I am capable of working at a job that requires sales skills. 1 2 3 4 5

14. If I graduated tomorrow, I am capable of working at a job that requires drafting skills. 1 2 3 4 5

15. If I graduated tomorrow, I am capable of working at a job that requires art skills. 1 2 3 4 5

16. If I graduated tomorrow, I am capable of working at a job that requires media skills (radio or television) 1 2 3 4 5

17. If I graduated tomorrow, I am capable of working at a job that requires child-care skills. 1 2 3 4 5
18. If I graduated tomorrow, I am capable of working at a job that requires food preparation skills. 1 2 3 4 5
19. If I graduated tomorrow, I am capable of working at a job that requires business skills. 1 2 3 4 5
20. If I graduated tomorrow, I have a good understanding of what I am qualified to do. 1 2 3 4 5

APPENDIX C

PARENT SURVEY OF CONFIDENCE IN THEIR CHILD'S JOB PREPAREDNESS

PARENT SURVEY OF
CONFIDENCE IN THEIR CHILD'S
JOB PREPAREDNESS

Please respond to the following statements by indicating how strongly you agree or disagree with them with regard to your child, _____. For example:

5 indicates strong agreement.
4 indicates some agreement.
3 indicates neither opinion.
2 indicates some disagreement.
1 indicates strong disagreement.

Please circle the number which best describes your opinion.

1. If my child graduated tomorrow, he/she is capable of working at a job that requires mechanical skills. 1 2 3 4 5
2. If my child graduated tomorrow, he/she is capable of working at a job that requires electrical skills. 1 2 3 4 5
3. If my child graduated tomorrow, he/she is capable of working at a job that requires electronic skills. 1 2 3 4 5
4. If my child graduated tomorrow, he/she is capable of working at a job that requires science skills. 1 2 3 4 5

5. If my child graduated tomorrow, he/she is capable of working at a job that requires math skills. 1 2 3 4 5
6. If my child graduated tomorrow, he/she is capable of working at a job that requires computer skills. 1 2 3 4 5
7. If my child graduated tomorrow, he/she is capable of working at a job that requires writing skills. 1 2 3 4 5
8. If my child graduated tomorrow, he/she is capable of working at a job that requires reading skills. 1 2 3 4 5
9. If my child graduated tomorrow, he/she is capable of working at a job that requires speaking skills. 1 2 3 4 5
10. If my child graduated tomorrow, he/she is capable of working at a job that requires telephone skills. 1 2 3 4 5
11. If my child graduated tomorrow, he/she is capable of working at a job that requires keyboard skills (typing or wordprocessing). 1 2 3 4 5
12. If my child graduated tomorrow, he/she is capable of working at a job that requires filing skills. 1 2 3 4 5
13. If my child graduated tomorrow, he/she is capable of working at a job that requires sales skills. 1 2 3 4 5
14. If my child graduated tomorrow, he/she is capable of working at a job that requires drafting skills. 1 2 3 4 5
15. If my child graduated tomorrow, he/she is capable of working at a job that requires art skills. 1 2 3 4 5
16. If my child graduated tomorrow, he/she is capable of working at job that requires media skills (radio/television) 1 2 3 4 5
17. If my child graduated tomorrow, he/she is capable of working at a job that requires child-care skills. 1 2 3 4 5

18. If my child graduated tomorrow, he/she is capable of working at a job that requires food preparation skills. 1 2 3 4 5
19. If my child graduated tomorrow, he/she is capable of working at a job that requires business skills. 1 2 3 4 5
20. If my child graduated tomorrow, he/she is prepared to know what he/she is qualified to do. 1 2 3 4 5

APPENDIX D

EMPLOYER SURVEY OF CONFIDENCE IN THEIR STUDENT-EMPYOYEE'S JOB PREPAREDNESS

EMPLOYER SURVEY OF
CONFIDENCE IN THEIR STUDENT-EMPYOYEE'S
JOB PREPAREDNESS

Please respond to the following statements about _____ by indicating how strongly you agree or disagree with them. For Example:

5 indicates strong agreement.
4 indicates some agreement.
3 indicates no opinion.
2 indicates some disagreement.
1 indicates strong disagreement.

Please circle the number which best describes your opinion.

1. This employee is capable of working at a job that requires mechanical skills. 1 2 3 4 5
2. This employee is capable of working at a job that requires electrical skills. 1 2 3 4 5
3. This employee is capable of working at a job that requires electronic skills. 1 2 3 4 5
4. This employee is capable of working at a job that requires science skills 1 2 3 4 5

5. This employee is capable of working at a job that requires math skills. 1 2 3 4 5
6. This employee is capable of working at a job that requires computer skills. 1 2 3 4 5
7. This employee is capable of working at a job that requires writing skills. 1 2 3 4 5
8. This employee is capable of working at a job that requires reading skills. 1 2 3 4 5
9. This employee is capable of working at a job that requires speaking skills. 1 2 3 4 5
10. This employee is capable of working at a job that requires telephone skills. 1 2 3 4 5
11. This employee is capable of working at a job that requires keyboard skills (typing or wordprocessing). 1 2 3 4 5
12. This employee is capable of working at a job that requires filing skills. 1 2 3 4 5
13. This employee is capable of working at a job that requires sales skills. 1 2 3 4 5
14. This employee is capable of working at a job that requires drafting skills. 1 2 3 4 5
15. This employee is capable of working at a job that requires art skills. 1 2 3 4 5
16. This employee is capable of working at a job that requires media skills (radio or television) 1 2 3 4 5
17. This employee is capable of working at a job that requires child-care skills. 1 2 3 4 5

18. This employee is capable of working at a job that requires food preparation skills. 1 2 3 4 5

19. This employee is capable of working at a job that requires business skills. 1 2 3 4 5

20. This employee understands his/her vocational strengths and weaknesses. 1 2 3 4 5